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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
WASHINGTON 25, D. C.

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U. S. DEPARTMENT OF AGRICULTURE

In Cooperation with State and Federal Agencies

COTTON INSECT CONDITIONS FOR WEEK ENDING JULY 14, 1945
(Twelfth Cotton Insect Survey Report for 1945)

Light to heavy rains with moderate temperatures over the greater part of the cotton belt were favorable for boll weevil development. Increases in weevil infestation occurred during the week in Oklahoma, Louisiana, Georgia, and South Carolina and the protection afforded weevil grubs in fallen squares by moist conditions indicates an increase in other states.

The ample supply of moisture in most sections is causing rank, succulent growth of plants that is also conducive to bollworm and leafworm damage.

No new infestations of leafworms were reported and only two additional worms were found in the Lower Rio Grande Valley of Texas. The hot, dry weather and premature opening of cotton in this area are apparently holding the leafworms in check.

Temporary local shortages of sulfur were reported from the Waco district of Texas. Reports from other sections of Texas and other states indicated ample supplies of sulfur-calcium arsenate mixtures and calcium arsenate. The supply of nicotine continues tight but is improving.

BOLL WEEVIL

TEXAS: Rains and moisture were sufficient to excessive in all of Texas except the extreme southern area and scattered counties in the Edwards Plateau and high plains. North central blacklands and eastern districts need dry weather for field work and to prevent boll weevil increase. Heavy local hail damage occurred in El Paso County; otherwise cotton in the Trans-pecos area continued in good condition.

Peak of harvest has been reached in the Lower Valley with much premature opening of bolls due to hot, dry weather. Picking is general in the Corpus Christi area.

Reports obtained through the cooperation of 4-H Club members, Future Farmers of America, and State and Federal Entomologists on 398 fields in 63 counties averaged 29% infested squares as compared to 32% last week. The weighted average infestation of 21% for the state, based on the cotton production in each crop reporting district, in comparison to 22% last week, gives a better index of weevil conditions as more records are now being made in the central, northern, and western districts. Ten percent of the fields examined were not infested; 20% of the fields ranged from 1 to 10%; 27% from 11 to 25% infestation; 23% from 26 to 50% infestation; and 20% above 50% infestation. In 17 southeastern counties the average infestation was 43%; in 17 blackland counties 31%; and in 6 rolling plains counties 2%. Insecticides were being used for boll weevil on only 9 of the fields examined.

(Over)

OKLAHOMA: Rains and showers were favorable for weevil increase and infestations showed a sharp rise. Square examinations in 182 fields in 27 counties averaged 22% this week in comparison to 10% last week. Ten percent of the fields were not infested; 38% of the fields ranged between 1 and 10%; 21% between 11 and 25%; 14% between 26 and 50%; and 17% of the fields above 50% infestation. In eight southeastern counties the infestation averaged 46%; in 9 south central counties 20%; in 3 southwestern counties 6%; and above 10% infestation generally over eastern and central Oklahoma.

LOUISIANA: General rains during the week made conditions very favorable for weevil increase throughout the state. In central Louisiana rains interfered with dusting programs. Many growers have started insecticide applications in the northeastern parishes. The supply of calcium arsenate on the farms and in dealers' hands appears adequate for the present but the supply of nicotine-calcium arsenate mixtures is limited.

The weevil infestation in 429 fields from all sections of the state averaged 27%, an increase from 18% last week. Only 4% of the fields were not infested; 27% of the fields ranged from 1 to 10%; 27% from 11 to 25%; 23% from 26 to 50%; and in 19% of the fields above 50% infestation. The highest infestations were in the central and southwestern sections but dusting is needed in many fields throughout the state.

ARKANSAS: Rainfall during the week was favorable for weevil development. The square infestation in 163 fields mostly in the southern third of the state averaged 11% this week as compared to 10% last week. No infested squares were found in 50% of the fields; from 1 to 10% infestation in 25%; from 11 to 25% infestation in 18%; and from 26 to 50% infestation in 7% of the fields.

MISSISSIPPI: Rain in most sections of the state made conditions ideal for weevils.

Weevil-infested squares were found in 235 of the 303 fields examined by all co-operators. The average infestation was 7% for all fields examined and 9.5% for the infested fields. The apparent decrease from last week is due to an increase in squares and more reports from lightly infested Delta fields. Fields with more than 50% infested squares were reported from Copiah, Lafayette, Tippah, and Warren Counties, and more than 25% infested squares from Adams, Jasper, Washington, and Yazoo Counties.

Showers and cloudy weather occurred in the Delta again this week. Infestations were found in 171 of the 235 fields examined in 12 Delta counties, with an average of 7% for all fields and 9.5% for the infested fields. No infested squares were found in 28% of the Delta fields; less than 10% in 55% of the fields; from 11 to 25% in 14% of the fields; and 26% or more in 3% of the fields.

Dusting was reported in only one Delta field, though other growers are planning to start next week. Most growers have stored or booked calcium arsenate but not all have calcium arsenate-nicotine mixtures on hand or booked.

GEORGIA: Favorable weather has prevented climatic control and a heavy emergence of first generation field weevils next week, followed by serious damage, is expected in the Piedmont.

Examinations of 215 fields in 69 counties, including some from the Upper Piedmont and Mountain sections, averaged 26.7% infested squares. Last week the average infestation of 22% included more reports from the southern half of the State. Two percent of the fields were not infested; in 16% of the fields the range was from 1 to 10%; in 33% of the fields from 11 to 25%; in 38% of the fields from 26 to 50%; and in 11% of the fields the infestation averaged more than 50%. Some control is being used with fair to good results, but dusting is needed in many more fields.

SOUTH CAROLINA: Hot, dry weather prevailed over most of the central Piedmont and western sections of the State but frequent showers occurred in the extreme southern and eastern counties. Cotton in the Piedmont improved and although climatic control has diminished the prospect of weevil damage, there are enough weevils present to cause serious damage if the weather becomes favorable. Many fields in the southern counties have a good crop of bolls set but in some cases weevils are damaging the young bolls. Cotton is approaching the peak of fruiting in the Pee Dee section.

Examinations of 278 fields in 39 counties averaged 21.7% punctured squares as compared to 15.5% last week. Seven percent of the fields examined were not infested; in 28% of the fields the infestation ranged from 1 to 10%; in 36% of the fields from 11 to 25%; in 18% of the fields from 26 to 50%; and 11% of the fields had more than 50% of the squares infested. The highest infestations were in the southern counties where squares are becoming scarce.

NORTH CAROLINA: Weather generally favorable and weevils increased considerably.

The infestation in 105 fields in 14 south central and Piedmont counties averaged 11%. No infested squares were found in 4% of the fields; from 1 to 10% in 67% of the fields; from 11 to 25% in 24% of the fields; and more than 26% in 5% of the fields. Some fields had very high infestations and the average was 10% or above in Duplin, Sampson, Wayne, Harnett, Scotland, and Anson Counties.

VIRGINIA: Dr. J. M. Grayson reports 1% infestation in 2 fields and no infestation in 1 field examined near Holland.

COTTON FLEA HOPPER

TEXAS: Reports on 390 fields in 63 counties averaged 6.6 flea hoppers per 100 terminal buds or practically the same as last week. In 32% of the fields no flea hoppers were found; in 45% of the fields less than 10 flea hoppers and in 23% of the fields more than 10 flea hoppers per 100 terminal buds were found. Sulfur or mixtures of sulfur-calcium arsenate are being used for control in some sections.

OKLAHOMA: Flea hoppers are increasing. The average number found this week in 207 fields in 26 counties was 6.7 as compared to 4 per 100 terminal
(over)

buds last week. In 38% of the fields no flea hoppers were found; in 40% of the fields less than 10 and in 22% of the fields more than 10 flea hoppers per 100 terminal buds were present.

OTHER PLANT BUGS

Salt River Valley, Arizona: Weather hot and sultry and some fields are beginning to shed badly. A good many alfalfa fields were cut for hay or seed and insects increased in all cotton fields observed. A considerable acreage has been dusted. Sweepings in the Goodyear area averaged 33 injurious insects on stub cotton and 22 for 100 net strokes on plant cotton. This is an increase from 16 on stub and 7 on plant cotton last week. Sweepings near Mesa averaged 8.5 injurious insects per 100 strokes as compared to 5.5 last week; at Sacaton 12.7; at Buckeye 68, and at Litchfield 18 per 100 net strokes before dusting was started on the experimental plots.

Santa Cruz Valley, Arizona: With scattered showers and cloudy weather cotton is setting many bolls and no abnormal shedding has been noted to date. Populations of insects continue low, averaging from 0 to 6 per 100 net strokes.

Graham County, Arizona: Cotton making good progress. Sweepings ranged from 0 to 22 injurious insects per 100 strokes in the Solomonsville area.

Greenlee County, Arizona: Cotton is later and insect populations range from 0 to 2 per 100 net strokes.

Eddy and Chavez Counties, New Mexico: Cotton is late and just beginning to bloom. Lygus and flea hopper populations are still low in Eddy County but are higher in Chavez County than at this time last year. Much interest is being shown in cotton insect control.

Tarnished and rapid plant bugs continue to cause some damage in Mississippi, Louisiana, and Texas but populations seem to be decreasing.

MISCELLANEOUS INSECTS

Aphids were building up to the damage point in one undusted field observed in the Salt River Valley of Arizona. Ladybird beetles are present in large numbers but it is doubtful if they will control the infestation.

Aphids are becoming more abundant in Georgia, especially on dusted fields. A few medium to heavy infestations were reported.

Bollworms continue to increase in Texas and light to damaging infestations are present in many fields. Weather conditions that are favorable for the boll weevil are also favorable for bollworm development.

Grasshopper damage continues about the same. Local damage to cotton occurs in many counties in Texas and Oklahoma.

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Prepared July 18, 1945.